UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,927	02/27/2004	Werner Penkert	NHL-KEH-26A	6812

52671 7590 07/06/2007

KENNAMETAL INC.
1600 TECHNOLOGY WAY
LATROBE, PA 15650-0231

EXAMINER	
ADDISU, SARA	
ART UNIT	PAPER NUMBER
3722	
MAIL DATE	DELIVERY MODE
07/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,927	PENKERT, WERNER	
	Examiner	Art Unit	
	Sara Addisu	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6,7,13,14,18-20,23,24 and 27-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18* is/are allowed.

6)☒ Claim(s) *1,2,4,6,7,13,14,19,20,23,24 and 27-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the amendment filed 4/10/07. Currently, claims 1, 2, 4, 6, 7, 13, 14, 18-20, 23, 24, 27-34 are pending in this application.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 8/28/01. It is noted, however, that applicant has not filed a certified copy of the 101 42 049.8 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 23, 24, 27, 28 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- Claims 23, 24, 27, 28 and 29 recite "organic adhesive" and "adhesive comprising dimethacrylate ester". Further review of the Specification/drawings do not mention this claimed subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A) and further in view of Komanduri (US Patent No. 4,714,385).

Lagerberg teaches an indexable insert (13) having an insert body (23) with a working hard material circular wafer (24: Figure 3) preferably consisting of ceramics (Figures 1, 3 & 6, and Col. 2, lines 27-31) with recess for receiving the working hard material circular wafer (24). Legerberg also teaches the wafer (24) being secured to the body (23) preferably through welding or soldering ('606, col. 2, lines 30-33). Regarding

the limitation "said at least one cutting body being joined to said base body by a non-metallic adhesive configured to withstand high temperatures generated during use of the cutting insert in recessing or copy turning metal workpieces", it is old and well known to use an adhesive such as resin type (non-metallic) as a substitute to soldering (as evidenced by Takahashi et al., which teaches a cutting tool with a ceramic cutting body (11) attached to base body using resin type adhesive (6,7) or solder, '006, abstract).

However, Lagerberg is silent about the material used for the base body of the insert (i.e. doesn't teach cemented carbide body).

Komanduri teaches cutting tools having a thin diamond/CBN layer (for the cutting portion) and cemented carbide backing (to provide the support base) ('385, Col. 1, lines 34-36 and 58-63). Komanduri also teaches the substrate structure can have any number of desired shapes and also has a recess for receiving said layer. ('385, Col. 2, line 66 to Col. 4, line 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lagerberg's invention such that the base body of the insert is made of cemented carbide as taught by Komanduri because cemented carbide bodies are commercially available and are well known in the art, and have been used as substrates ('385, Col. 2, lines 36-38).

2. Claims14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-99006A) , Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with a working hard material circular wafer (24: Figure 3) preferably consisting of ceramics with recess for receiving the working hard material circular wafer (24), as set forth in the above rejection.

However, the modified device of Lagerberg is silent about the cutting body having a maximum diameter in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm.

Lindstedt teaches a cutting insert (10) having a base body (with side surfaces 11, 12 and end surfaces 15,16) and integrally formed a cutting body (18) ('680, figures 1-4 and col. 2, lines 8-14). Lindstedt also teaches the cutting body (18) being provided with a circular cutting edge (19) with a diameter of 3-5 mm ('680, figure 2 and Col. 3, lines 7-8).

Lagerberg discloses the claimed invention (i.e. a circular wafer/tip) except for the diameter of the cutting tip having a maximum diameter in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the diameter of the cutting body (e.g. be in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm as taught by Lindstedt) depending on the size of the insert and machining application, because it has been held that where the

general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

3. Claims 23, 24 and 29, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-99006A) , Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680) and Shouse (USP 5,868,530).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with a working hard material circular wafer (24: Figure 3) preferably consisting of ceramics with recess for receiving the working hard material circular wafer (24), as set forth in the above rejection. The modified device of Lagerberg also teaches the cutting body having a maximum diameter in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm (refer to theabove rejection of claim 14 for further detail).

However, the modified device of Lagerberg fails to teach the adhesive comprising an organic adhesive dimethacrylate ester.

Shouse teaches an insert having a base body (10) and cutting body (50) ('530, figure 1). Shouse also teaches typical cutting tools comprise a cutting tip of hard material such as diamond or carborundum detachably secured to a cutting tip support, commonly, the cutting tip is secured directly to the support by adhesive or a bolt ('530, col. 1, lines 19-23). With respect to the adhesive comprising an organic adhesive or

dimethacrylate ester, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any appropriate adhesive, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Applicant should further note that Specification gives no criticality to the claimed limitation (also see 112, 1st paragraph rejection above for the introduction of new matter regarding the claimed subject matters of claims 23 and 24).

4. Claims 2 and 4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-99006A) , Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680) and Shouse (USP 5,868,530) and Parker (U.S. Patent No. 4,552,491)

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with recess for receiving a working hard material circular wafer (24), as set forth in the above rejection.

However, the modified device of Lagerberg fails to teach the cutting body having a perpendicular circular truncated cone shape with one end surface being smaller in diameter than opposite end surface.

Parker teaches an insert having a (perpendicular) truncated cone-shape with the larger part of the diameter on the top planar end (14) and the side wall intersecting with

the top surface to form circumferential cutting edge ('491, Figures 1 & 2). Furthermore, Parker teaches cylindrical wall (18) of the insert tapering to provide relief (clearance) angle (B) that is in the range of 4-10 degrees but preferably at 7 degrees ('491, Col. 3, lines 7-8 & 17-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lagerberg's invention such that the circular shaped wafers (tips) are replaced by a perpendicular circular truncated cone shape with one end surface being smaller in diameter than opposite end surface as taught by Parker because Lagerberg teaches that the shape of the wafer (tip) may vary depending on the type of machining wanted ('491, Col. 2, lines 33-35).

5. Claims 6 and 7, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-99006A) , Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680) and Shouse (USP 5,868,530) and Parker (U.S. Patent No. 4,552,491) and (European Publication No. 0552714).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with recess for receiving a working hard material circular wafer (24), as set forth in the above rejection. Furthermore, regarding claim 7, Parker teaches

cylindrical wall (18) of the insert tapering to provide relief (clearance) angle (B) that is in the range of 4-10 degrees but preferably at 7 degrees ('491, Col. 3, lines 7-8 & 17-20).

Regarding claim 6, the modified device of Lagerberg teaches teaches the claimed invention, a cutting insert having a circular wafer (tip) where the exposed cutting edge has a partial circle shape, except for the specific angle of the partial circle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the partial circle angle such that is 200 degrees but not more than 230 degrees, to have control of the flow of the chips at all times, as evidenced by (European Publication No. 0552714, Col. 2, lines 40-47), because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Applicant should further note that Specification gives no criticality or unexpected results to the claimed limitation (see Page 8, lines 18-19 and page 12, lines 1-6).

6. Claim 13, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-99006A) , Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680) and Shouse (USP 5,868,530), Parker (U.S. Patent No. 4,552,491), (European Publication No. 0552714) and Morsch (U.S. Pub. No. 2002/0131832).

The modified device of Lagerberg teaches a cutting insert as set forth in the above rejection.

However, the modified device of Lagerberg fails to teach one groove, defined by raised portions on either side, extending transversely to the longitudinal axis of the insert.

Morsch teaches a cutting insert (510: figure 23) having a cemented carbide body ('832, Page 2, paragraph 38, lines 1-2) with recess (575) for receiving U-shaped tip (cutting body) (585). Morsch also teaches teaches the tip having a top and front wall that intersect to form partial circle cutting edge ('832, Page 1, paragraph 12, lines 3-4). Furthermore, Morsch teaches clamping surface (598) having one groove, defined by raised portions on either side, extending transversely to the longitudinal axis of the insert (see figure 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lagerberg's invention such that the insert is secured by a clamp as taught by Morsch, since it is well known in the art to secure an insert using any number of different configurations, whether it be a hold down screw or a clamp (2002/0131832, Page 4, paragraph 75).

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of in view of Takahashi et al. (JP 62-

99006A), Komanduri (US Patent No. 4,714,385) and further in view of Wiman et al. (U.S. Patent No. 6,217,263).

The modified device of Lagerberg teaches an insert as set forth in the above rejection. Legerberg also teaches the wafer (24) being secured to the body (23) preferably through welding or soldering ('606, col. 2, lines 30-33). Regarding the limitation "said at least one cutting body being joined to said base body by a non-metallic adhesive configured to withstand high temperatures generated during use of the cutting insert in recessing or copy turning metal workpieces", it is old and well known to use an adhesive such as resin type (non-metallic) as a substitute to soldering (as evidenced by Takahashi et al., which teaches a cutting tool with a ceramic cutting body (11) attached to base body using resin type adhesive (6,7) or solder, '006, abstract).

However, the modified device of Langerberg fails to teach the use of the insert for copy-turning a workpiece.

Wiman et al. teaches an indexable metal (therefore capable of being used on workpiece made of aluminum) insert, adapted for copy-turning (Abstract, lines1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Lagerberg's insert for copy-turning a workpiece taught by Wiman et al., since it is well known in the art to use indexible inserts for application within a broad range such as copy-turning ('263, Col. 1, lines 15-18).

8. Claims 27 and 28, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A), Komanduri (US Patent No. 4,714,385) and further in view of Wiman et al. (U.S. Patent No. 6,217,263) and Shouse (USP 5,868,530).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with a working hard material circular wafer (24: Figure 3) preferably consisting of ceramics with recess for receiving the working hard material circular wafer (24), as set forth in the above rejection. Regarding claim 20,

However, the modified device of Lagerberg fails to teach the adhesive comprising an organic adhesive dimethacrylate ester.

Shouse teaches an insert having a base body (10) and cutting body (50) ('530, figure 1). Shouse also teaches typical cutting tools comprise a cutting tip of hard material such as diamond or carborundum detachably secured to a cutting tip support, commonly, the cutting tip is secured directly to the support by adhesive or a bolt ('530, col. 1, lines 19-23). With respect to the adhesive comprising an organic adhesive or dimethacrylate ester, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any appropriate adhesice, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Applicant should further note that Specification gives no criticality to the claimed

limitation (also see 112, 1st paragraph rejection above for the introduction of new matter regarding the claimed subject matters of claims 23 and 24).

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A), Komanduri (US Patent No. 4,714,385) and further in view of Wiman et al. (U.S. Patent No. 6,217,263), Shouse (USP 5,868,530) and Lindstedt (USP 5,205,680).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with a working hard material circular wafer (24: Figure 3) preferably consisting of ceramics with recess for receiving the working hard material circular wafer (24), as set forth in the above rejection.

However, the modified device of Lagerberg is silent about the cutting body having a maximum diameter in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm.

Lindstedt teaches a cutting insert (10) having a base body (with side surfaces 11, 12 and end surfaces 15,16) and integrally formed a cutting body (18) ('680, figures 1-4 and col. 2, lines 8-14). Lindstedt also teaches the cutting body (18) being provided with a circular cutting edge (19) with a diameter of 3-5 mm ('680, figure 2 and Col. 3, lines 7-8).

Lagerberg discloses the claimed invention (i.e. a circular wafer/tip) except for the diameter of the cutting tip having a maximum diameter in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the diameter of the cutting body (e.g. be in the range of 4 +/- 0.05 mm to 10 +/- 0.05 mm as taught by Lindstedt) depending on the size of the insert and machining application, because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

10. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A), Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680) Parker (U.S. Patent No. 4,552,491).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with recess for receiving a working hard material circular wafer (24), as set forth in the above rejection.

However, the modified device of Lagerberg fails to teach the cutting body having a perpendicular circular truncated cone shape.

Parker teaches an insert having a (perpendicular) truncated cone-shape with the larger part of the diameter on the top planar end (14) and the side wall intersecting with

the top surface to form circumferential cutting edge ('491, Figures 1 & 2). Furthermore, Parker teaches cylindrical wall (18) of the insert tapering to provide relief (clearance) angle (B) that is in the range of 4-10 degrees but preferably at 7 degrees ('491, Col. 3, lines 7-8 & 17-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lagerberg's invention such that the circular shaped wafers (tips) are replaced by a perpendicular circular truncated cone shape with one end surface being smaller in diameter than opposite end surface as taught by Parker because Lagerberg teaches that the shape of the wafer (tip) may vary depending on the type of machining wanted ('491, Col. 2, lines 33-35).

11. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A), Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680), Parker (U.S. Patent No. 4,552,491) and (European Publication No. 0552714).

The modified device of Lagerberg teaches an indexable insert (13) having an insert body (23) with recess for receiving a working hard material circular wafer (24), as set forth in the above rejection. Furthermore, regarding claim 33, Parker teaches

cylindrical wall (18) of the insert tapering to provide relief (clearance) angle (B) that is in the range of 4-10 degrees but preferably at 7 degrees ('491, Col. 3, lines 7-8 & 17-20).

Regarding claim 32, the modified device of Lagerberg teaches teaches the claimed invention, a cutting insert having a circular wafer (tip) where the exposed cutting edge has a partial circle shape, except for the specific angle of the partial circle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the partial circle angle such that is 200 degrees but not more than 230 degrees, to have control of the flow of the chips at all times, as evidenced by (European Publication No. 0552714, Col. 2, lines 40-47), because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Applicant should further note that Specification gives no criticality or unexpected results to the claimed limitation (see Page 8, lines 18-19 and page 12, lines 1-6).

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagerberg (U.S. Patent No. 4,632,606) in view of Takahashi et al. (JP 62-99006A), Komanduri (US Patent No. 4,714,385) and further in view of Lindstedt (USP 5,205,680), Parker (U.S. Patent No. 4,552,491), (European Publication No. 0552714) and Morsch (U.S. Pub. No. 2002/0131832).

The modified device of Lagerberg teaches a cutting insert as set forth in the above rejection.

However, the modified device of Lagerberg fails to teach one groove, defined by raised portions on either side, extending transversely to the longitudinal axis of the insert.

Morsch teaches a cutting insert (510: figure 23) having a cemented carbide body ('832, Page 2, paragraph 38, lines 1-2) with recess (575) for receiving U-shaped tip (cutting body) (585). Morsch also teaches teaches the tip having a top and front wall that intersect to form partial circle cutting edge ('832, Page 1, paragraph 12, lines 3-4). Furthermore, Morsch teaches clamping surface (598) having one groove, defined by raised portions on either side, extending transversely to the longitudinal axis of the insert (see figure 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lagerberg's invention such that the insert is secured by a clamp as taught by Morsch, since it is well known in the art to secure an insert using any number of different configurations, whether it be a hold down screw or a clamp (2002/0131832, Page 4, paragraph 75)

Allowable Subject Matter

3. Claim 18 is allowed.

Response to Arguments

- Regarding claims 1, 19 and 29, the due to the amendment , new ground(s) of rejection are made in view of Takahashi et al. (JP 62-99006A).

- However, regarding the rest of the claims, Applicant's arguments filed 4/10/07 have been fully considered but they are not persuasive.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Please refrer to:

- page 29, 2nd paragraph
- page 30, 2nd paragraph
- page 31, 2nd paragraph
- page 33, 2nd paragraph

- page 34, 2nd paragraph
- page 35, 2nd paragraph
- page 36, 2nd paragraph
- page 37, 2nd paragraph
- page 30, 2nd paragraph

- In response to Applicant's argument (page 26, 2nd paragraph) that "A weld, for example, literally fuses two objects together to prevent or, at the very least, absolutely minimize detachment or separation. Lagerberg therefore teaches a permanent or nearly permanent connection where detachment is apparently undesirable based on the choice of welding or soldering for the connection. Shouse teaches the exact opposite in that Shouse suggests the use of an adhesive or a bolt to form a detachable connection", Examiner respectfully points out that welding/soldering are also detachable and also there are a wide range of adhesive with different adhesion strengths therefore the mere mention of the term "adhesive" does not make it easy to detach (i.e. certain adhesives could also "nearly permanently secure" two parts). Examiner also believes that when using an adhesive to secure a cutting body to a base body, one would hope that the adhesive is strong to make sure the cutting body is fixedly attached and the adhesive could withstand high temperature to make sure the cutting body does not move/chatter to assure precise cut on the workpiece.

- Regarding Applicants response (pages 39-40), after further review of the Specification, Examiner still asserts that the invention that the Applicant claims should be disclosed adequately and accurately. Merely citing Patents does not mean what is disclosed in the body of the patents cited is also the invention of the Applicant. There is no explicit statement by Applicant that such specifically enumerated prior arts are "hereby incorporated by reference" Claims 23, 27 and 29 recite that the "adhesive comprises an organic adhesive," and Claims 24 and 28 recite that the "adhesive comprises dimethacrylate ester." It is respectfully submitted that the prior art of record does not teach or suggest these limitations. Support for these limitations can be found in U.S. Patent 4,532,270 to Rossi et al., column 3, lines 24-30 and 53-56. U.S. Patent 4,532,270 is listed on page 19, lines 16-18, of the specification as originally filed and was incorporated by reference therein..". Claims 23, 24, 27 and 28 also recite "organic adhesive" and "adhesive comprising dimethacrylate ester". Further review of the Specification/drawings do not mention this claimed subject matter.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara Addisu
(571) 272-6082

SA
6/25/07

Monica S. Carter
MONICA CARTER
SUPERVISORY PATENT EXAMINER